



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



October 27, 2020

**Federally-Enforceable District-Origin Operating Permit
(FEDOOP)
Statement of Basis**

Source: Frontier Logistical Services, LLC
3601 Ralph Ave.
Louisville, KY 40211

Owner: Frontier Logistical Services, LLC
3601 Ralph Ave.
Louisville, KY 40211

| | | | |
|------------------------|----------------|----------------------------|---------------|
| Application Documents: | See Table I-7 | Administratively Complete: | June 30, 2020 |
| Draft Permit: | Sept 25, 2020 | Proposed Permit: | Sept 25, 2020 |
| Permitting Engineer: | Jessica Murray | Permit Number: | O-0740-20-F |
| Plant ID: 0740 | SIC: 5169 | NAICS: | 42269 |

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

This permitting action is being taken to renew the operating permit for a five year operating period.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}) and sulfur dioxide (SO₂). Jefferson County is classified as a nonattainment area for ozone (O₃).

Permit Application Type:

| | | |
|---|--|--|
| <input type="checkbox"/> Initial issuance | <input type="checkbox"/> Permit Revision | <input checked="" type="checkbox"/> Permit renewal |
| | <input type="checkbox"/> Administrative | |
| | <input type="checkbox"/> Minor | |
| | <input type="checkbox"/> Significant | |

Compliance Summary:

| | |
|---|---|
| <input checked="" type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included |
| <input type="checkbox"/> Source is out of compliance | <input checked="" type="checkbox"/> Source is operating in compliance |

I Source Information**1. Product Description:**

Froniter Logistical Services, LLC operates a bulk liquid chemical distribution facility.

2. Process Description:

Froniter Logistical Services, LLC stores, packages, and distributes bulk liquid chemicals.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

| Emission Unit | Equipment Description |
|----------------------|---|
| U1 | Vertical above ground storage tanks |
| U2 | Drumming room; packaging of solvents from storage tanks |
| U3/U4 | Railcar Loading and Unloading Racks |

5. Fugitive Sources:

Fugitive VOC and HAP emissions result from the handling, transferring and storage of volatile organic chemicals.

6. Permit Revisions:

| Permit No. | Public Notice Date | Issue Date | Change Type | Description/Scope |
|-------------------|---------------------------|-------------------|--------------------|--------------------------|
| 312-03-F | NA | 01/31/04 | Initial | Initial Permit Issuance |
| O-0740-15-F | 07/10/2015 | 08/18/2015 | Renewal | Permit Renewal |
| O-0740-20-F | 09/25/2020 | 10/27/2020 | Renewal | Permit Renewal |

7. Application and Related Documents

| Document Number | Date | Description |
|------------------------|-------------|--------------------------------|
| 141976 | 06/02/2020 | Application FEDOOP STAR Exempt |

| Document Number | Date | Description |
|-----------------|------------|---|
| 149106 | 06/29/2020 | Application 100P and Additional Information |

8. Emission Summary

| Pollutant | District Calculated Actual Emissions (tpy) 2019 Data | Pollutant that triggered Major Source Status (based on PTE) |
|------------------------------|--|---|
| CO | 0 | No |
| NO _x | 0 | No |
| SO ₂ | 0 | No |
| PM ₁₀ | 0 | No |
| VOC | 0.5693 | Yes |
| Total HAPs | 0.205 | Yes |
| Largest Single HAP: Methanol | 0.1023 | Yes |

9. Applicable Requirements

☒ 40 CFR 60 ☒ SIP ☐ 40 CFR 63
☐ 40 CFR 61 ☒ District Origin ☐ Other

10. Referenced Federal Regulations: NA**11. Non-Applicable Regulations:**

| Regulation | Title | Reason for Non-applicability |
|--------------------------|--|--|
| 40 CFR 63 Subpart CCCCCC | National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities | This source no longer “splash blends” ethanol and gasoline; therefore, this source is not a gasoline dispensing facility. |
| 40 CFR 63 Subpart EEEE | National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) | This source has taken synthetic minor limits for HAPs. A FEDOOP permit with synthetic minor limits for HAPs was issued on January 31, 2004, prior to the compliance date of February 5, 2007 |
| 40 CFR 60 Subpart Kb | Standards of Performance for Volatile Organic | Although the storage tanks E-8, E-9, and E-10 are greater than 19,812.9 |

| Regulation | Title | Reason for Non-applicability |
|------------|---|---|
| | Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 | gallons, the vapor pressure used in the tanks are below 15 kPa (2.1 psia). Therefore, this regulation does not apply. |

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Frontier Logistical Services, LLC does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Basis of Regulation Applicability

a. Applicable Regulations

| Regulation | Title | Basis |
|------------|---|--|
| 2.17 | Federally Enforceable District Origin Operating Permits | Establishes procedures for the District to issue federally enforceable District origin operating permits. |
| 5.00 | Standards for Toxic Air Contaminants and Hazardous air Pollutants, Definitions | Defines terms and applies to regulation of hazardous air pollutants |
| 6.13 | Standard of Performance for Existing Storage Vessels for Volatile Organic Compounds | Applies to VOC storage tanks greater than 250 gallon capacity that were installed before September 1, 1976 |
| 7.12 | Standard of Performance for Existing Storage Vessels for Volatile Organic Compounds | Establishes VOC standards for VOC storage vessels constructed after April 19, 1972 with a storage capacity greater than 250 gallons |
| 6.22 | Standard of Performance for Existing Volatile Organic Materials Loading Facilities | Applies to loading facilities which load more than 200 gallons/day of volatile organic materials into tank trucks, trailer, or railroad tank cars, |

| Regulation | Title | Basis |
|------------|---|--|
| | | commenced before September 1, 1976 |
| 7.22 | Standard of Performance for New Volatile Organic Materials Loading Facilities | Applies to loading facilities which load more than 200 gallons/day of volatile organic materials into tank trucks, trailer, or railroad tank cars, commenced on or after July 14, 1976 |
| 7.25 | Standard of Performance for New Sources Using Volatile Organic Compounds | Establishes VOC standards for affected facilities constructed after June 13, 1979. |

b. Plantwide

- i. Frontier Logistical Services, LLC is potentially major for total HAP and the single HAPs toluene, hexane, and methanol. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.
- ii. Regulations 5.00, 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Frontier Logistical Services, LLC has requested emission limits of less than 25 tons per year for all criteria pollutants, less than 12.5 tons/year for total HAPs and less than 5 tons per year for each individual HAP to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.
- iii. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.
- iv. Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

| Reporting Period | Report Due Date |
|-------------------------|-------------------------------|
| January 1 - June 30 | August 29 |
| July 1 - December 31 | March 1 of the following year |

c. Emission Unit U1 – Vertical above ground storage tanks

| EP | Description | Applicable Regulations |
|-----------|---|-------------------------------|
| E-1 | Tank ¹ , Toluene Capacity: 15,000 gal | 6.13 |
| E-2 | Tank ¹ , Normal Propyl Acetate Capacity: 15,000 gal | 6.13 |
| E-3 | Tank ¹ , Propylene Capacity 15,000 gal | 6.13 |
| E-4 | Tank ¹ , Xylene Capacity: 15,000 gal | 6.13 |
| E-6 | Tank ¹ , Methanol Capacity: 19,500 gal | 7.12 |
| E-7 | Tank ¹ , 300-360 Solvent Capacity: 19,500 gal | 7.12 |
| E-8 | Tank ¹ , Ethanol Capacity: 30,000 gal | 7.12 |
| E-9 | Tank ¹ , Bio Diesel Capacity: 30,000 gal | 7.12 |
| E-10 | Tank ¹ , Rule 66 Mls Capacity: 30,000 gal | 7.12 |
| E-11 | Tank ¹ , Hexane Capacity: 10,000 gal | 6.13 |
| E-12 | Tank ¹ , Normal Propyl Alcohol Capacity: 10,000 gal | 6.13 |
| E-13 | Tank ¹ , Isopropyl OH Capacity: 10,000 gal | 6.13 |
| E-14 | Tank ¹ , Methanol Capacity: 15,000 gal | 6.13 |
| E-15 | Tank ¹ , 100 Solvent Capacity: 15,000 gal | 6.13 |
| E-16 | Tank ¹ , VM & P Naptha Capacity: 15,000 gal | 6.13 |
| E-17 | Tank ¹ , NB Acetate Capacity: 10,000 gal | 6.13 |
| E-19 | Tank ¹ , Toluene Capacity: 10,000 gal | 6.13 |
| E-20 | Tank ¹ , Toluene Capacity: 10,000 gal | 6.13 |

¹ Regulations 6.13/7.12 apply due to the size of the tanks (greater than 250 gallons), but the vapor pressure of the material stored in the tank is less than 1.5 psia. These tanks have submerged fill, but submerged fill is not required.

| EP | Description | Applicable Regulations |
|------|--|------------------------|
| E-21 | Tank ¹ , Ethylene Glycol Capacity: 15,000 gal | 6.13 |
| E-22 | Tank ¹ , Aromatic 100 Solvent Capacity: 10,000 gal | 6.13 |
| E-23 | Tank ¹ , 142 Solvent Capacity: 10,000 gal | 6.13 |
| E-25 | Tank ¹ , Isobutyl acetate Capacity: 10,000 gal | 6.13 |

Equipment Not Regulated

| Emission Point | Description | Capacity | Stack ID |
|----------------|--|------------|----------|
| E-5 | Tank ² , Acetone (Submerged Fill) | 15,000 gal | Fugitive |
| E-18 | Tank ² , Acetone (Submerged Fill) | 10,000 gal | Fugitive |
| E-24 | Tank ³ , MEK (Submerged Fill) | 10,000 gal | Fugitive |

i. Standards

VOC

- (a) Regulation 6.13 and 7.12, section 3.3 requires submerged fill for each storage tank if the materials have an as stored vapor pressure of 1.5 psia or greater.
- (b) Per Construction Permit 481-92-C, storage tanks E-6, E-7, E-8, E-9, and E-10 shall be equipped with a pressure vacuum vent with 8 oz./in² pressure and -1 oz./in² vacuum.
- (c) Per Construction Permit 481-92-C, no tank of 75 cubic meters or larger (E-8, E-9, E-10) shall be used to store product with a vapor pressure of 15 kPa (2.1 psia) or greater unless controls per Federal Regulation 40 CFR 60 Subpart Kb are added and the approval of the District is obtained.

² Per Regulation 1.02, section 1.84.23 acetone has been determined to have negligible photochemical reactivity and is excluded from the definition of volatile organic compound. Regulations 6.13 and 7.12 apply to storage tanks greater than 250 gallons that contain volatile organic compounds.

³ Methyl Ethyl Ketone has been removed from the EPA list of hazardous air pollutants as of December 19, 2005 and therefore is not covered by regulation 5.14.

d. Emission Unit U2 – Drumming room; packaging of solvents from storage tanks

| EP | Description | Applicable Regulations |
|------|--|------------------------|
| E-33 | Packaging of solvents into portable containers Capacity: 2000 gph | 7.25 |

i. Standards

VOC

The BACT requirements of Regulation 7.25 do not apply to affected facilities with potential VOC emissions less than or equal to 5 tons per year. Therefore, the source is subject to a VOC emission limit of 5 tons during any consecutive 12-month period from EU U2, Solvent packaging.

e. Emission Unit U3/U4: Railcar Loading/Unloading and Unloading Racks

| EP | | Description | Applicable Regulations |
|----|------|---|------------------------|
| U3 | E-32 | Railcar Loading/Unloading Capacity: 7,000 gph, 20,000 gpd | 6.22 |
| | E-34 | Bulk truck loading rack (drumming room) Capacity: 7,000 gph, 20,000 gpd | 7.22 |
| U4 | E-35 | Ethanol unloading rack with two loading arm (from Ethanol storage tanks E-8 & E-9) | 7.22 |

i. Standards

VOC

Per Regulation 6.22 and 7.22, the source shall not load any volatile organic materials into any tank, truck, trailer, or railroad car from the loading facility (EU U3) unless such loading is accomplished by submerged fill, bottom loading, or equivalent methods. To avoid control requirements prescribed by Regulation 6.22 and 7.22, the source shall not load 20,000 gallons or more in any one day.

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

There are no records of any violations since the last operating permit was issued.

6. Calculation Methodology or Other Approved Method:

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc.) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

The VOC storage tanks emission calculations are based upon the VOC content of the stored material and the amount of material in the tank. The HAP emission calculations are based upon the throughput of HAP containing material used and weight percent of the HAP.

7. Insignificant Activities

| Equipment | Qty | PTE (ton/yr) | Regulation Basis |
|--|-----|-----------------|--|
| Diesel Storage Tank Capacity 65.8 gal | 1 | VOC =2.5E-05 | Regulation 1.02, Appendix A, section 3.25 |

- Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
- Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.
- The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
- Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) Basis of Regulation Applicability for IA units